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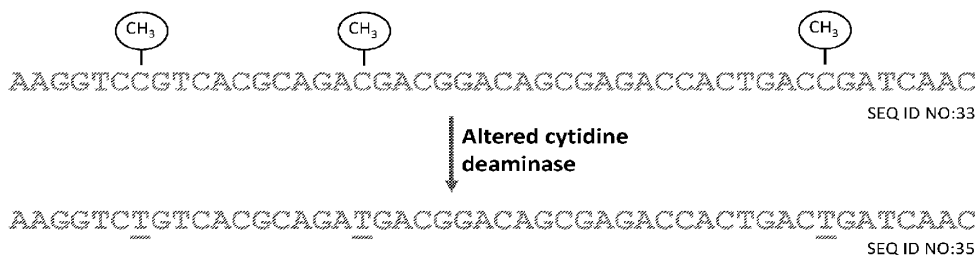
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(54) Title: ALTERED CYTIDINE DEAMINASES AND METHODS OF USE

FIG. 1E



(57) Abstract: The present disclosure is concerned with proteins, methods, compositions, and kits for mapping of methylation status of nucleic acids, including 5-methylcytosine and 5-hydroxymethyl cytosine (5hmC). In one embodiment, proteins are provided that selectively act on certain modified cytosines of target nucleic acids and converts them to thymidine or modified thymidine analogues. In another embodiment, proteins are provided that selectively act on certain modified cytosines of target nucleic acids and converts them to uracil or thymidine and selectively do not act on other certain modified cytosines of target nucleic acids. Also provided are compositions and kits that include one or more of the proteins and methods for using one or more of the proteins.

[Continued on next page]

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